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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,806	03/04/2002	Saeko Kurachi	111204	1604

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EXAMINER

JOHNSON, CHRISTINA ANN

ART UNIT	PAPER NUMBER
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1725

DATE MAILED: 08/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/086,806

Applicant(s)

KURACHI, SAEKO

Examiner

Christina Johnson

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6-10,12,22,23 and 41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9,10 and 12 is/are rejected.
- 7) ☒ Claim(s) 1,2,6-8,22,23 and 41 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119


- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 15, 2005 has been entered. 

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 9 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Andorf et al.

Andorf et al. (US 5,955,395) discloses a catalyst composition useful in the selective of carbon monoxide. The catalyst composition comprises platinum metal supported on a zeolite carrier (column 2, lines 5-33). Suitable zeolites include ZSM-5 (Figure 2, column 3, lines 20-25, and column 4, lines 18-30). The ZSM-5 zeolite taught

Art Unit: 1725

by the reference would necessarily have a pore size within the claimed range and is an example of a solid acid carrier. The reference teaches that the catalyst composition may be employed in a reactor for the selective oxidation of carbon monoxide from hydrogen-rich feeds originating from a methanol reforming reactor (column 2, lines 5-10 and column 3, lines 54-68). It is taught that the catalyst is useful in producing outlet streams which are very low in CO and suitable for use in a fuel cell (columns 2-3).

The intended use limitations recited throughout the claims are noted by the examiner. While intended use recitations cannot entirely be disregarded, in composition and article claims, the intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention over the prior art. *In re Casey*, 370 USPQ 235 and *In re Otto*, 312 USPQ 458. It is the position of the examiner that the prior art structure is capable of performing the intended use and therefore meets the instant claims.

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Andorf et al.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 1725

5. Claims 9-10 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 833 401 in view of Andorf et al.

EP 0 833 401 discloses an apparatus for reducing carbon monoxide. With reference to Figure 1, the EP reference teaches a reforming reactor in combination with a CO selective oxidizing unit. The effluent from the oxidizing unit is then passed to a fuel cell, which receives supplies of the gaseous fuel produced by the fuel reformer (and containing reduced amounts of CO) and an oxygen containing oxidizing gas and generates an electromotive force through electrochemical reactions (Figure 1 and page 9, lines 20-30). The EP reference teaches that suitable CO selective oxidation catalysts include platinum metal on a support such as zeolite (column 39, lines 25-40).

The difference between the reference and the claims is that the reference does not disclose the specific zeolite claimed, i.e. ZSM-5 or ferrierite.

Andorf et al. (US 5,955,395) discloses a catalyst composition useful in the selective of carbon monoxide. The catalyst composition comprises platinum metal supported on a zeolite carrier (column 2, lines 5-33). Suitable zeolites include ZSM-5 (Figure 2, column 3, lines 20-25, and column 4, lines 18-30). The ZSM-5 zeolite taught by the reference would necessarily have a pore size within the claimed range and is an example of a solid acid carrier. The reference teaches that the catalyst composition may be employed in a reactor for the selective oxidation of carbon monoxide from hydrogen-rich feeds originating from a methanol reforming reactor (column 2, lines 5-10 and column 3, lines 54-68). It is taught that the catalyst is useful in producing outlet streams which are very low in CO and suitable for use in a fuel cell (columns 2-3).

Art Unit: 1725

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the EP reference to include the use of the catalyst composition taught by Andorf et al. in the reactor and fuel cell in light of the teaching by Andorf et al. that the catalyst is useful for selective CO oxidation. One would have been motivated to do so in light of the specific teaching by Andorf et al. that the catalyst may be used in a CO selective oxidation reactor coupled with a reformer for the specific purpose of reducing CO concentrations prior to passing the effluent to a fuel cell.

Allowable Subject Matter

6. Claims 1-2, 6-8, 22-23, and 41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 9-10 and 12 have been considered but are moot in view of the new ground(s) of rejection.

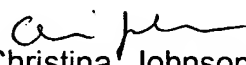
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Johnson whose telephone number is (571) 272-1176. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

Art Unit: 1725

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Christina Johnson
Patent Examiner
Art Unit 1725

8/25/05

CAJ
August 25, 2005